

**REMARKS/ARGUMENTS**

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-3 and 5-14 are presently active; Claim 4 was previously cancelled without prejudice or disclaimer, Claims 1, 5, and 6 have been presently amended. New Claims 13 and 14 have been added. No new matter has been added.

In the Office Action, Claims 1-3, 5, 6, 11 and 12 were rejected under 35 U.S.C. § 103(a) as being unpatentable over McDiarmid et al (U.S. Patent No. 6,301,434) in view of Okase et al (U.S. Patent No. 6,399,922), Claims 7-10 were rejected under 35 U.S.C. § 103(a) as being unpatentable over McDiarmid et al in view of Okase et al and in view of Aoyama et al (U.S. Patent No. 5,651,827). In the Office Action, there was an indication that the Information Disclosure Statement (IDS) filed October 27, 2007 was not proper and not considered.

**Regarding the IDS**, the IDS filed October 27, 2007 contained an English translation of the Chinese Office Action, where the cited references were first cited. Under M.P.E.P. § 609.04(a) III, the provided English translation of the Chinese Office Action makes the filed IDS proper and should be considered and initialed by the examiner.

M.P.E.P. § 609.04(a) III states:

. . . the requirement for a concise explanation of relevance can be satisfied by submitting an English-language version of the search report or action which indicates the degree of relevance found by the foreign office.

**Regarding the 35 U.S.C. § 103(a) rejection**, M.P.E.P. § 2143.03 requires, to establish a case of *prima facie* obviousness, all the claim limitations must be taught or suggested by the prior art. Presently, Claim 1 has been amended to define:

A substrate processing apparatus, comprising:

a processing vessel that defines a processing space;  
an ultraviolet light source that irradiates ultraviolet light into the processing vessel;  
***a gas injection nozzle unit that is connected to a side of the processing vessel and is configured to inject gas into the processing vessel;***  
an opaque case made of quartz that covers an inner wall of the processing vessel and includes an opening arranged to face against the ultraviolet light source through which opening the ultraviolet light passes;  
***a remote plasma part that is connected to the side of the processing vessel at which the gas injection nozzle unit is arranged and is configured to supply radicals to the process vessel;***  
a heater portion that heats a substrate introduced inside the opaque case to a predetermined temperature;  
a holding member that holds the substrate above the heater portion;  
and  
rotational drive means for rotating an axis of the holding member that penetrates through the heater portion.  
[Emphasis Added.]

These features are supported in the originally filed specification by Figures 3, 9, 10, 18-20, 56 and 59A-59B. In particular, see the specification's discussion of gas injection nozzle unit 93 at pages 20 and 26-27 with regard to of Figures 18-20.<sup>1</sup> In particular, see the specification's discussion of remote plasma part 27 at pages 16, 31, and 32 with regard to Figures 9 and 10.

Applicant submits that these added features are not present in McDiarmid et al, Okase et al, or Aoyama et al. In particular, the added feature of a remote plasma part that is connected to the side of the processing vessel at which the gas injection nozzle unit is arranged and is configured to supply radicals to the process vessel is a feature not found in the art. While McDiarmid et al shows in Figure 1A a gas inlet 108, there is no disclosure in McDiarmid et al of a remote plasma part, much less the claimed remote plasma part that is connected to the side of the processing vessel at which the gas injection nozzle unit is arranged. Figure 1A of McDiarmid et al is reproduced for the sake of convenience on the next page.

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<sup>1</sup> The new claims are supported by these portions of the specification and these figures.

To add such a remote plasma part that is connected to the side of the processing vessel at which the gas injection nozzle unit is arranged to McDiarmid et al would require substantial rework to the components of McDiarmid et al. Furthermore, McDiarmid et al's purpose is to provide a thermal processing system by the array of heating lamps 146 mounted above window 144. There is no disclosure in McDiarmid et al of any plasma processing.

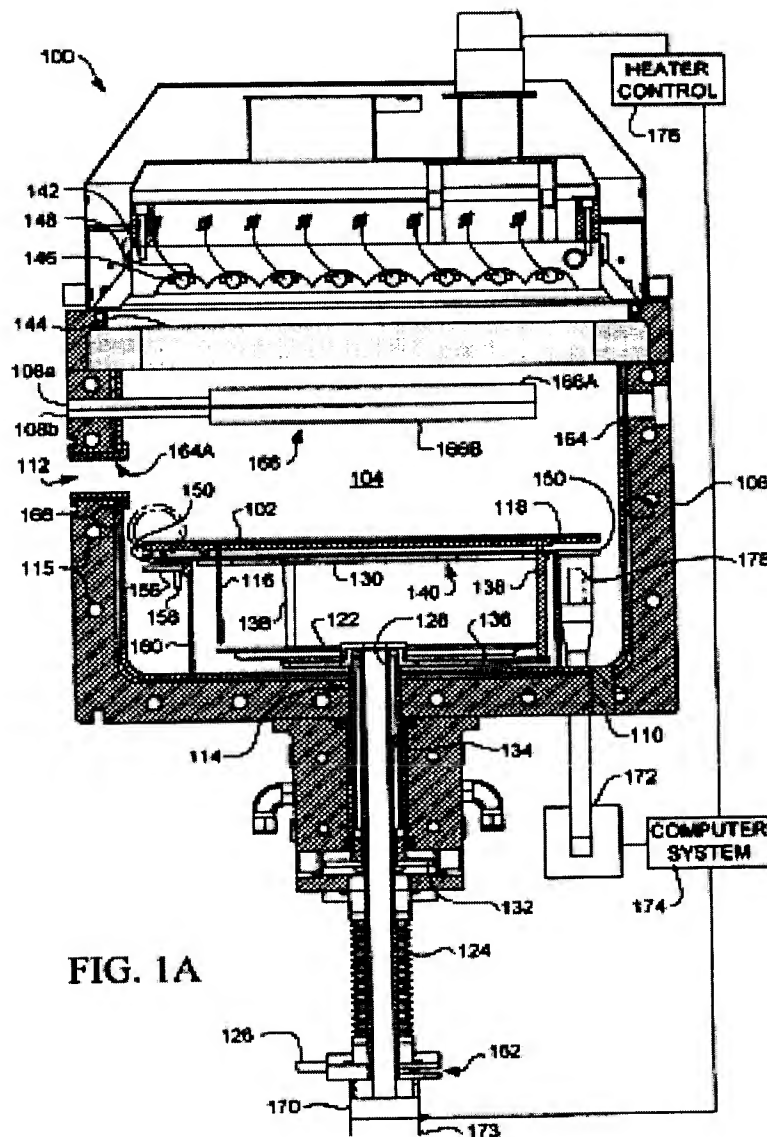


FIG. 1A

In re Ratti, 270 F.2d 810, 813, 123 USPQ 349, 352 reversed an obviousness rejection where the suggested combination of references would require a substantial reconstruction and

redesign of the elements shown in the primary reference as well as a change in the basic principle under which the [primary reference] construction was designed to operate.

Thus, it would require a substantial reconstruction and redesign of the elements shown in McDiarmid et al as well as a change in the basic principle under which McDiarmid et al operates in order for McDiarmid et al to have a a remote plasma part that is connected to the side of the processing vessel at which the gas injection nozzle unit is arranged and is configured to supply radicals to the process vessel.

Accordingly, McDiarmid et al fails to disclose or suggest or make obvious a remote plasma part that is connected to the side of the processing vessel at which the gas injection nozzle unit is arranged and is configured to supply radicals to the process vessel; as presently defined in Claim 1.

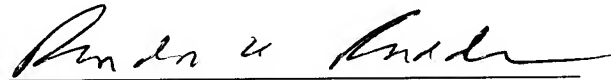
The deficiencies of McDiarmid et al are not overcome by Okase et al or Aoyama et al, which likewise provide no disclosure of plasma processing.

Hence, when the defined features are considered as a whole, Claim 1 and the claims dependent therefrom are believed to patentably define over McDiarmid et al, Okase et al, and Aoyama et al.

**Conclusion,** in view of the present amendment and in light of the above discussions, the outstanding grounds for rejection are believed to have been overcome. The application as amended herewith is believed to be in condition for formal allowance. An early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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